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Applicant(s):	Toshiaki MORITA
Int'l App. No.:	PCT/JP2004/004487
Application No.:	**NEW APPLICATION**
Filed:	October 18, 2005
For:	KNITTING METHOD AND APPARATUS USING STRETCH YARN (as amended)

LETTER

Customer Service Window   October 18, 2005
Randolph Building
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Alexandria, VA 22314
Mail Stop PCT

Sir:

Amended sheets are attached hereto (which correspond to Article 34 amendments or to claims attached to the International Preliminary Examination Report), as required by 35 U.S.C. § 371(c)(3). Please replace the corresponding original specification pages included herewith with the Article 34 amended pages of the specification. Please note that the Article 34 amended claims have been incorporated in the included Preliminary Amendment.

Respectfully submitted,

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for the production.

Disclosure of the Invention

An object of the invention is to provide a knitting method and apparatus using a stretch yarn using capable of easily acquiring a fabric having a desired feeling.

The invention provides a knitting method using a stretch yarn for knitting a fabric with a stretch yarn by a knitting machine capable of controlling yarn tension, comprising:

predetermining data specifying relationships between a feed length of the stretch yarn to be used for knitting fed to the knitting machine and a finished state of a knitted fabric obtained by shape memory properties of the stretch yarn, for each of different yarn tensions;

specifying the finished state of the knitted fabric; and

knitting a fabric while feeding the stretch yarn to the knitting machine according to the finished state specified, the yarn tension having the relationships to the data, and the feed length of the stretch yarn.

Moreover, the invention is characterized in that the finished state is specified by the stitch loop length of the knitted fabric and the yarn tension.

Moreover, the invention is characterized by further comprising:

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preparing paper pattern data expressing a shape of a

of the knitted fabric obtained by shape memory properties of the stretch yarn, so that the knitted fabric is brought into the finished state inputted to the specification input means.

Moreover, the invention is characterized in that:

the data to be stored in the data storage means contains gauge feeling data indicating a knitting needle array density necessary for a case in which a fabric having a feeling on a stitch loop length equivalent to that of the finished state of the knitted fabric is to be knitted with a knitting yarn other than the stretch yarn; and

the specification input means can also specify the finished state with the gauge feeling data.

Moreover, the invention is characterized in that:

the data storage means is prepared with data specifying the relationships on the stretch yarn and the knitting texture for predetermined references; and

the data storage means contains not only that data but also data on correction coefficients to the data which are used in a case where other stretch yarns and knitting structures are used and which are concerned with a standard stretch yarn and a standard knitting texture.

Brief Description of Drawings

Other and further objects, features, and advantages of the invention will be more explicit from the following detailed

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CLAIMS

1.   A knitting method using a stretch yarn for knitting a
fabric with a stretch yarn by a knitting machine capable of
controlling yarn tension, comprising:

predetermining data specifying relationships between
a feed length of the stretch yarn to be used for knitting fed
to the knitting machine and a finished state of a knitted fabric
obtained by shape memory properties of the stretch yarn, for
each of different yarn tensions;

specifying the finished state of the knitted fabric;
and

forming a fabric while feeding the stretch yarn to the
knitting machine according to the finished state specified,
the yarn tension having the relationships to the data, and the
feed length of the stretch yarn.

2.   The knitting method of claim 1, wherein the finished
state is specified by the stitch loop length of the knitted
fabric and the yarn tension.

3.   The knitting method of claim 1 or 2, further comprising:
preparing paper pattern data expressing a shape of a
knitted product to be formed of the fabric using the stretch
yarn, and a feeling sample to be knitted by using said stretch
yarn and varying the yarn tension and the stitch loop length

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of the fabric being knitted;

performing the specification of the finished state of the knitted fabric based on the feeling sample; and

creating knitting control information for knitting the knitted product with the knitting machine according to the specified finished state and the paper pattern data, thereby to form the knitted fabric according to the knitting control information created.

4.   A knitting apparatus using a stretch yarn for knitting a fabric with a stretch yarn by a knitting machine, comprising:

data storage means for predetermining and storing data specifying relationships between a feed length of the stretch yarn to be used for knitting fed to the knitting machine and a finished state of a knitted fabric obtained by shape memory properties of the stretch yarn, for each of different yarn tensions;

specification input means for inputting a specification of the finished state of the knitted fabric; and

control means for creating control data for forming a knitted fabric with reference to the data stored in the data storage means, while feeding the stretch yarn in the feed length and under the yarn tension corresponding to the finished state of the knitted fabric, so that the knitted fabric is brought into the finished state inputted to the specification input

means.